

CLAIMS

1. A method of improving the rheological properties of a flour dough and the quality of the finished product made from the dough, comprising adding to the dough ingredients, dough additives or the dough an effective amount of an oxidoreductase which is at least capable of oxidizing maltose.
2. A method according to claim 1 wherein the oxidoreductase is hexose oxidase.
3. A method according to claim 2 wherein the hexose oxidase is derived from a source selected from an algal species, a plant species and a microbial species.
4. A method according to claim 3 wherein the hexose oxidase is derived from *Chondrus crispus*.
5. A method according to claim 2 wherein hexose oxidase is added in an amount which is in the range of 1 to 10,000 units per kg of flour.
6. A method according to claim 5 wherein the hexose oxidase is added in an amount which is in the range of 10 to 1000 units per kg of flour.
7. A method according to claim 1 or 2 wherein the resistance to extension of the dough in terms of the ratio between the resistance to extension (height of curve, B) and the extensibility (length of curve, C), i.e. the B/C ratio, as measured by the AACC method 54-10 is increased by at least 10% relative to that of an otherwise similar dough not containing oxidoreductase.
8. A method according to claim 1 wherein the finished product is bread.

9. A method according to claim 1 wherein the finished product is a noodle product.
10. A method according to claim 1 wherein the finished product is an alimentary paste product.
- 5 11. A method according to claim 1 wherein at least one further enzyme is added to the dough ingredients, dough additives or the dough.
12. A method according to claim 11 wherein the further enzyme is selected from the group consisting of a cellulase, a
10 hemicellulase, a xylanase, a starch degrading enzyme, a glucose oxidase, a lipase and a protease.
13. A dough improving composition comprising an oxidoreductase which is at least capable of oxidizing maltose and at least one further dough ingredient or dough additive.
- 15 14. A composition according to claim 13 wherein the oxidoreductase is derived from a source selected from an algal species, a plant species and a microbial species.
15. A composition according to claim 14 wherein the oxidoreductase is hexose oxidase.
- 20 16. A composition according to claim 15 wherein the hexose oxidase is derived from *Chondrus crispus*.
17. A composition according to claim 13 which is a pre-mixture useful for preparing a baked product or in making a noodle product or an alimentary paste product.
- 25 18. A composition according to claim 13 which comprises an additive selected from the group consisting of an emulsifying agent and a hydrocolloid.

19. A composition according to claim 18 wherein the hydrocolloid is selected from the group consisting of an alginate, a carrageenan, a pectin and a vegetable gum.

20. A method of preparing a bakery product the method comprising preparing a flour dough to which is added an effective amount of an oxidoreductase which is at least capable of oxidizing maltose, and baking the dough.

21. A method according to claim 20 wherein the specific volume of the bakery product is increased relative to an otherwise similar bakery product prepared from a dough not containing oxidoreductase.

22. A method according to claim 21 wherein the specific volume is increased by at least 20%.

23. A method according to claim 20 wherein at least one further enzyme is added to the dough.

24. A method according to claim 20 wherein the further enzyme is selected from the group consisting of a cellulase, hemicellulase, a xylanase, an starch degrading enzyme, a glucose oxidase, a lipase and a protease.

25. A method according to claim 20 wherein the oxidoreductase is hexose oxidase.

26. A method of preparing a flour dough-based food product, comprising adding to the dough an effective amount of a maltose oxidizing oxidoreductase.

27. A method according to claim 26 wherein the oxidoreductase is hexose oxidase.